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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,087	03/16/2004	Ching-Yu Chang	2003-1435 / 24061.911	4048

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EXAMINER	
EL ARINI, ZEINAB	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,087	CHANG ET AL.	
	Examiner	Art Unit	
	Zeinab E. EL-Arini	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The rejection under 35 U.S.C. 112, second paragraph, stated in paper No. 20071112 has been withdrawn in view of applicants' remarks.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application

No. 11/251,330. Although the conflicting claims are not identical, they are not patentably distinct from each other because the process and system in both applications are functionally equivalent. This is also because claim 1 does not include any cleaning step, therefore it is obvious from claims 1 and 8 of the co-pending application, and the process in both applications is functionally equivalent

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 8 of copending Application No. 11/384,624. Although the conflicting claims are not identical, they are not patentably distinct from each other because the process as claimed in claims 1-3 is obvious from claims 1-2 and 8 of the co-pending application. This is also because claim 1 does not include any cleaning step, and the process in both applications is functionally equivalent. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hazelton et al. (2006/0023185) in combination with Amblard et al. (7,056,646) and JP 402204468 (JP'468) and Ho et al. (7,070,915) new references.

Re. claims 1-27, Hazelton et al. teach a system of cleaning a wafer in an ILS apparatus with a cleaning liquid which has an affinity for the material absorbed on the wafer, which can be dirt and water. See the abstract, paragraphs 27, 29, 31-38 and 40, 44-51. With respect to the system (claims 15-19), see Figs. 1 and 10.

Hazelton et al. do not teach the surfactant, and means for providing surfactant, and the second fluid comprises NH4OH, and H2O2.

Amblard et al. disclose immersion lithography methods involving using a base developer as an immersion lithography fluid. See the abstract. The reference discloses that by employing a base developer as the immersion lithography fluid, the projection lens remains clean see col. 3, lines 2-6. Re. the immersed fluid containing surfactant, see col. 4, lines 25-29. The reference discloses that the fluid comprises solvents include de-ionized water, surfactants, and base compound comprises ammonium hydroxide. The reference discloses that it may be desirable to increase or decrease the index of refraction by making a slight increase or decrease in the concentration of the base compound in the immersion lithography fluid. See col. 4, lines 1-5.

Surfactants are known as a water-removing and drying agent, especially for removing water adhered on precise equipments, printed boards, and optical lenses, etc. See JP'468 (the abstract).

Ho et al disclose a method and system for drying a substrate. See the abstract, col. 3, lines 37-47, col. 4, lines 22-27, col. 5, line 10-col. 7, line 9.

It would have been obvious to one skilled in the art to replace the ethanol of Hazelton et al. with the surfactant of the Amblard et al. or JP'468, because both ethanol and surfactant have strong affinity to water. This is because Hazelton et al. disclose that any cleaning liquid may be used provided it has a sufficiently strong affinity to the liquid to be removed, see paragraph 35. Furthermore, since the means for applying the surfactant reads on any applicator in the ILS. Therefore, the claimed apparatus can be any typical ILS, as surfactant application is an intended use, see Ho et al. col. 5, lines 35-38, and the document in general. Re. claims 24, and 26-27, it is well known in the art to use H2O2, and ozone in cleaning optical element.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-5, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Amblard et al (7,056,646).

Amblard et al. disclose a method for cleaning lens used in an immersion lithography system as claimed. See the abstract, col. 3, lines 2-16, and col. 4, lines 25-30.

Response to Arguments

10. Applicants' arguments with respect to claims 1-27 are unpersuasive. With respect to Hazelton et al. is not prior art, because the filing date of Hazelton is after March 16, 2004 filing date of the present application. Applicants' argument is unpersuasive, because the priority date for Hazelton et al. is April 11, 2003 and June 27, 2003. See 60/462,556 (pages 1-2), and 11/237,651 (2006/0023185) which is a continuation of PCT/US 2004/010309), see paragraphs 3-4, 9-10, and 34-35. See also a copy of PCT/US 2004/010309, page 2, line 13-30, page 4, line 20- page 5, line 3, page 5, line 28-page 6, line 2,and page 6, lines 8-31, and the document in general.

11. With respect to the nonanalogous art, applicants' argument is persuasive; therefore Van Slyke reference has been withdrawn. With respect to the rejection under 35 U.S.C. 112, second paragraph, applicants' argument is persuasive; therefore the 112 rejection has been withdrawn. With respect to the double patenting rejections, applicants, argument is unpersuasive; therefore the double patenting rejections are maintained.

Conclusion

12. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is 571-272-1301. The examiner can normally be reached on Monday.-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zeinab E EL-Arini
Primary Examiner
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1/30/08